



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,642	06/27/2001	Kenneth H. Abbott	890057-420C4	1958
27195 7590 07/30/2007 AMIN. TUROCY & CALVIN, LLP 24TH FLOOR, NATIONAL CITY CENTER 1900 EAST NINTH STREET CLEVELAND, OH 44114			EXAMINER CLOUD, JOIYA M	
			ART UNIT 2144	PAPER NUMBER
			MAIL DATE 07/30/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/894,642	KENNETH H. ABBOTT, KIRKLAND	
	<b>Examiner</b>	<b>Art Unit</b>	
	Joiya M. Cloud	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 66-172 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 66-172 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/22/2007</u> <del>03/21/2005</del> <del>03/01/2004</del>    | 6) <input type="checkbox"/> Other: _____                          |

***DETAILED ACTION***

1. This action is responsive to the application filed on March 22, 2007. Claims 66-104,107-109, AND 111-172 are pending in this application.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 66-104,107-109, AND 111-172** are rejected under 35 U.S.C. 102(e) as being anticipated by Carroll et al. (US Patent No. 6,285,757).

As per claim 66, Carroll teaches a method for a user characterization system executing remotely from a thin client wearable computer (Carroll , fig.1, remotely device 160, col.2, l.30-45, col.6, l.35-37) to provide information about a current state of a user of a thin client wearable computer, the user characterization system modeling the current state with multiple state attributes and including state server modules (SSMs) to supply values for the state attributes

Art Unit: 2144

(Carroll, col.5, l.39-43, in which the sensors 170 provides information corresponds to state attribute), state client modules (SCMs) to process values for the state attributes (Carroll, col.7, l.36-39, in which sensor 170 also process information on surrounding environment), and an intermediary module to facilitate exchange of state attribute values (Carroll, col.7, l.26-28, the interactive device corresponds to the intermediary module which can exchange the sensor information between inward and outward), the method comprising:

- a. under control of each SSM, gathering information about the current state of the user, generating values for at least one of the state attributes based on the gathered information, and sending the generated values to the intermediary module (Carroll, col. 5, l.42-45, the sensor corresponds SSM sends the distance information and lens provides the enhance view).
- b. under control of each SCM, receiving values for at least one state attribute from the intermediary module and performing processing based on the received values (Carroll, col.7, l.43-45, the interactive device can receive signal from GPS).
- c. under control of the intermediary module (interactive device), facilitating exchange of values by, receiving the sent values for the state attributes from the SSMS (Carroll, col.5, l.43-44, interactive device receives the information from sensor); automatically modeling values of other state attributes based at least in part on the sent values of the state attributes; and sending at least some of the received state values and at least some of the modeled other state attribute values to the SCMs (Carroll, col. 5, l.40-42, and conjunction with the lens (one of SCMs) to provide the enhance viewing); and

interacting with the thin client wearable computer in order to provide information about the user or to receive information about the user, the interacting being based at least in part on the modeled other state attribute values, so that the remotely executing user characterization system can obtain and provide information about the current state of the user of the thin client wearable computer (Carroll, fig.3, interactive device can remotely communicates with component 150, 160, 170).

**As per claim 67**, Carroll further discloses the method of claim 66 wherein the thin client wearable computer includes an output device, and wherein the interacting with the thin client wearable computer includes sending information for presentation to the user on the output device (Carroll, col.3, 1.23-25, the display interface corresponds to the output device ).

**As per claim 68**, Carroll further discloses the method of claim 67 wherein the Information to be sent for presentation to the user is generated by the processing of one of the SCMs, and wherein the sending of the information for presentation to the user on the output device is performed on behalf of that SCM (Carroll, col.5, 1.40-42, and conjunction with the lens (one of SCMs) to provide the enhance viewing).

**As per claim 69**, Carroll further discloses wherein the thin client wearable computer includes an input device, and wherein the interacting with the thin client wearable computer includes receiving information provided by the user via the input device (Carroll, col. 6, 1.60-62, microphone corresponds to input device).

**As per claim 70**, Carroll further discloses wherein the gathering of the information about the current state of the user by one of the SSMs includes obtaining the received information

Art Unit: 2144

provided by the user via the input device (Carroll,col.5, 1.32-34, the voice recognition need input from microphone).

**As per claim 71**, Carroll further discloses the method of claim 66 wherein the user characterization system executes on a computer remote from the thin client wearable computer, wherein the thin client wearable computer lacks resources accessible to the remote computer, and wherein the interacting with the thin client wearable computer includes receiving a request to access at least one of the resources on behalf of the thin client wearable computer and accessing those resources in response (Carroll, col.8, 1.31-34, the interactive communication corresponds to the accessing resource in response).

**As per claim 72**, Carroll further discloses the method of claim 71 wherein the at least one resources include processing capabilities of the remote computer, wherein the accessing of those resources includes using the processing capabilities on behalf of the thin client wearable computer, and including sending an indication of results to the thin client wearable computer (Carroll, col.8, 1.31-34 the interactive communication includes the sending an indication of result to the interactive device).

**As per claim 73**, Carroll further discloses the method of claim 71 wherein the at least one resources are storage capabilities of the remote computer, and wherein the accessing of those resources includes sending information stored on the storage capabilities to the thin client wearable computer (Carroll, fig.3, component 200).

**As per claim 74**, Carroll further discloses the method of claim 71 wherein the at least one resources are storage capabilities of the remote computer, and wherein the accessing of those

Art Unit: 2144

resources includes storing information received from the thin client wearable computer on the storage capabilities (Carroll, fig. 3, component 200).

**As per claim 75**, Carroll further discloses the method of claim 71 wherein the remote computer has a sensor receiving information about the user of the thin client wearable computer, and wherein the gathering of the information about the current state of the user by at least one of the SSMs includes obtaining information from the sensor (Carroll, col.7, 1.39-41).

**As per claim 76**, Carroll further discloses the method of claim 71 wherein the remote computer has an output device that is perceivable by the user of the thin client wearable computer, and wherein the performing of the processing based on the received values by at least one of the SCMs includes presenting information to the user on the output device. (Carroll, col.5, 1.40-43)

**As per claim 77**, Carroll further discloses the method of claim 66 wherein the gathering of the information about the current state of the user by at least one of the SSMs includes obtaining information from at least one sensor that is part of the thin client wearable computer (Carroll, col. 7, 1.35-38).

**As per claim 78**, Carroll further discloses the method of claim 66 wherein the performing of the processing based on the received values by at least one of the SCMs includes supplying information to at least one output device that is part of the thin client wearable computer (Carroll, col. 7, 1.30-35).

**As per claim 79**, Carroll further discloses the method of claim 66 wherein the user characterization system further includes an additional module executing on the thin client

wearable computer, and wherein the interacting with the thin client wearable computer includes interacting the additional executing module (Carroll, fig.3, component 180).

**As per claim 80**, Carroll further discloses the method of claim 66 wherein at least one of the SSMS executes on the thin client wearable computer and communicates with the intermediary module via wireless communication (Carroll, col.3, l.24-25).

**As per claim 81**, Carroll further discloses the method of claim 66 wherein at least one of the SCMS executes on the thin client wearable computer and communicates with the intermediary module via wireless communication (Carroll, col.3, l.39-45)

**As per claim 82**, Carroll further discloses the method of claim 66 wherein at least some of the SSMS are available to supply values for additional state attributes of a current state other than for the user, and wherein the intermediary module additionally sends values for the additional state attributes to SCMS (Carroll, col.5, l.10-14, col. 8, l.24-44, in which the interactive device can sends value either from sensor or computer and alerting alarms)

**As per claim 83**, Carroll further discloses a method in a computer for providing information about a current state related to a thin client, the current state represented with multiple state attributes, the method comprising :

- a. Obtaining information that is related to the current state (Carroll, col.5, l.40-42, lens obtaining the user information of distance from sensor);
- b. generating a value for each of multiple of the state attributes of the represented current state based on the obtained information (Carroll, col.5, l.40-42, lens automatic sizing);



- c. determining a module having an interest in at least one of the generated values (Carroll, col.5, 1.40-44, interactive device determine the sensor conjunction with lens); and
- d. providing to the determined module the generated values in which the determined module can act in accordance with the current state of the thin client (Carroll, col. 5, 1.40, lens automatic sizing corresponds to the act in accordance with the current state).

**As per claim 84**, Carroll further discloses the method of claim 83 wherein the thin client is a remote system including at least one of an input device and an output device (Carroll, col.3, 1. 47, 1.66-67).

**As per claim 85**, Carroll further discloses the method of claim 84 wherein the obtaining of the information that is related to the current state includes communicating with the thin client via wireless communication in order to receive the information from the thin client (Carroll, col. 3, 1.24-25).

**As per claim 86**, Carroll further discloses the method of claim 84 wherein the obtaining of the information that is related to the current state includes receiving information gathered by the input device of the thin client (Carroll, col. 7, 1.35-38).

**As per claim 87**, Carroll further discloses the method of claim 84 wherein the obtaining of the information that is related to the current state includes receiving information gathered by a sensor of the thin client (Carroll, col.7, 34-36)

**As per claim 88**, Carroll further discloses the method of claim 84 wherein the obtaining of the information that is related to the current state includes receiving information from a

computing device distinct from the thin client that has access to information about the thin client (Carroll, fig.3, component 200).

**As per claim 89**, Carroll further discloses the method of claim 88 wherein the distinct computing device has access to information about the thin client based on sensing the information (Carroll, col. 7, l.26-30).

**As per claim 90**, Carroll further discloses the method of claim 88 wherein the distinct computing device has access to information about the thin client based on interactions with the thin client (Carroll, col. 7, l.26-30).

**As per claim 91**, Carroll further discloses the method of claim 84 wherein the obtaining of the information that is related to the current state includes interacting with a software module executing on the thin client (Carroll, col. 5, l.34-35, voice recognition corresponds to the software module).

**As per claim 92**, Carroll further discloses the method of claim 84 wherein the determined module is executing on the thin client (Carroll, col. 5, l. 34-35).

**As per claim 93**, Carroll further discloses the method of claim 92 wherein the providing of the generated values to the determined module causes information to be presented on the output device of the thin client (Carroll, col. 5, l.33-34, to improve the sounds quality).

**As per claim 94**, Carroll further discloses the method of claim 84 wherein the thin client system lacks resources accessible to the computer and including accessing at least one of the resource on behalf of the thin client. (Carroll, col. 8, l.31-34).

**As per claim 95**, Carroll further discloses the method of claim 94 wherein the at least one resources include processing capabilities of the computer and wherein the accessing of those

resources includes using the processing capabilities on behalf of the thin client system (Carroll, fig.3, component 200)

**As per claim 96**, Carroll further discloses the method of claim 94 wherein the at least one resources are storage capabilities of the computer, and wherein the accessing of those resources includes storing information on or retrieve information from the storage capabilities (Carroll, col. 5, 1.34-35, voice recognition stores the user's voice)

**As per claim 97**, Carroll further discloses the method of claim 83 wherein the generating of the state attribute values based on the obtained information includes analyzing the obtained information (Carroll, col. 5, 1.34-35, voice recognition corresponds to the analyzing the obtained information)

**As per claim 98**, Carroll further discloses the method of claim 97 wherein the obtained information includes information from at least one input device of the thin client (Carroll, col. 5, 1.34-35, col.6, 1.60-62, microphone input user voice).

**As per claim 99**, Carroll further discloses the method of claim 97 wherein the obtained information includes information from at least one sensor device of the thin client (Carroll, col.5, 1.40-45).

**As per claim 100**, Carroll further discloses the method of claim 83 wherein the determining of the module having the interest in at least one of the generated values includes receiving a request from the determined module for those generated values. (Carroll, col.8, 1.31-34).

**As per claim 101**, Carroll further discloses the method of claim 83 wherein the determining of the module having the interest in at least one of the generated

Art Unit: 2144

values includes receiving a request from the determined module for values of the state attributes to which those generated values correspond (Carroll, col.5, l.40-44, interactive device determine the sensor conjunction with lens).

**As per claim 102**, Carroll further discloses the method of claim 83 wherein the determining of the module having the interest in at least one of the generated values includes identifying a previously supplied indication of interest from the determined module (Carroll, col. 11, l.59-60).

**As per claim 103**, Carroll further discloses the method of claim 83 wherein the determined module is a characterization module that facilitates exchange of values of the state attributes representing the current state related to the thin client (Carroll, col.7, l.26-28)

**As per claim 104**, Carroll further discloses the method of claim 83 wherein the determined module is a characterization module that models the current state related to the thin client (Carroll, col. 5, l.40-42).

**As per claim 107**, Carroll further discloses the method of claim 83 wherein the thin client is a computing device, and wherein the at least one state attributes represent information about the thin client (Carroll, col. 7, l.26-30).

**As per claim 108**, Carroll further discloses the method of claim 83 wherein the at least one state attributes represent information about a physical environment related to the thin client (Carroll, col.7, l.26-30).

**As per claim 109**, Carroll further discloses the method of claim 83 wherein the at least one state attributes represent information about a cyber-environment

related to the thin client (Carroll, col. 7, l.26-30).

**As per claim 111**, Carroll further discloses the method of claim 83 wherein the obtained information is received from the thin client, and wherein security information must be provided to the thin client before the information is supplied from the thin client. (Carroll, col. 5, l.10-13)

**As per claim 112**, Carroll further discloses the method of claim 83 wherein the obtained information is received from the thin client, and wherein security information must be received from the thin client before the obtained information is accepted from the thin client (Carroll, col. 5, l.10-13).

**As per claim 113**, Carroll further discloses the method of claim 83 wherein the determined module is part of the thin client, and wherein security information must be provided before the provided generated values are accepted by the thin client (Carroll, col. 5, l.10-13).

**As per claim 114**, Carroll further discloses the method of claim 83 wherein the determined module is part of the thin client, and wherein security information must be received from the thin client before the generated values are provided to the thin client (Carroll, col.5, l.10-13).

**As per claim 115**, Carroll further discloses the method of claim 83 wherein the thin client is a software module executing on a remote computing device (Carroll, col.4, l.9-11).

**As per claims 116-118** have similar limitation as claims 83-85. Therefore, claims 116-118 are rejected for the same reason set forth in the rejection of claims 83-85.

**As per claims 119-120** have similar limitation as claims 83, 85-86. Therefore, claims 119-120 are rejected under Carroll for the same reason set forth in the rejection of claim 83, 85-86.

**As per claim 121** has similar limitation as claim 83. Therefore, claim 121 is rejected under Carroll for the same reason set forth in the rejection of claim 83.

**As per claims 122-138** have similar limitation as claims 83-86, 91, 93-98, 100, 105-109. Therefore, claims 122-138 are rejected under Carroll for the same reason set forth in the rejection of claims 83-86, 91, 93-98, 100, 105-109.

**As per claim 139** has similar limitation as claim 122. Therefore, claim 139 is rejected under Carroll for the same reason set forth in the rejection of claim 122.

**As per claim 140**, Carroll further discloses a computer for providing functionality to a remote thin client portable computing device based on a context related to the remote thin client that is represented with multiple modeled attributed, comprising:  
an attribute value exchange module that is capable of obtaining values of the attributes from sources and of supplying the obtained values to clients having an interest in those values (Carroll, col.7, l.26-28), and a functionality provider module that is capable of receiving a request from the remote thin client and providing functionality as requested based on values of the attributes (Carroll, col.8, l.31-34).

**As per claim 141**, Carroll further discloses a method for a thin client computing device to assist a remote characterization module in modeling a current state of the thin client with multiple state attribute, the method comprising: receiving an indication of information related to the current state (Carroll, col.5, l.10-12); sending to the remote characterization module the

indicated information related to the current state (Carroll, col.5, l.10-12); receiving from the remote characterization module an instruction that is based on one or more values of the modeled state attributes (Carroll, col. 7, l.39-40); and performing the instruction in accordance with the current state.(Carroll, col. 7, l.41-43).

**As per claims 142-149** have similar limitation as claims 85-92. Therefore, claims 142-149 are rejected under Carroll for the same reason set forth in the rejection of claims 85-92.

**As per claims 150-160** have similar limitation as claims 83-84, 86-87, 93-96,105, and 107. Therefore, claims 150-160 are rejected under Carroll for the same reason set forth in the rejection of claims 83-84, 86-87, 93-96, 105, and 107.

**As per claims 161-172** have similar limitation as claims 150-160. Therefore, claims 161-172 are rejected under Carroll for the same reason set forth in the rejection of claims 150-160.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 105-106, and 110** are rejected under 35 U.S.C 103(a) as being unpatentable over Carroll in view of Hoffberg et al., (US Patent No. 6418424).

As per claims 105-106, and 110, Carroll fails to teach the mental state information and future state prediction of thin client user, and represents the information in the state attributes. However, Hoffberg clearly teaches the man-machine interface in order to meet user's needs. (Hoffberg, Abstract, col.27, l.27-30). These interfaces are ergonomically adapted to provide an optimized environment for human interaction with the device. Furthermore, a predicted input is presented for confirmation by the user, and the predictive mechanism is updated based on this feedback. The interface system predicts a desired action based on the user input, a past history of use, a context of use, and a set of predetermined or adaptive rules (Hoffberg, col.27, l.44-46).

Regarding mental state, Hoffberg teaches the research has been performed relating to VCR usability, technology, implementation, programming steps, current technology, input devices, and human mental capacity (Hoffberg, col.34, l.18-23). The interface and intelligent control of the present invention are applicable to control applications in medicine or surgery. The interface may be connected to various sensors, of the input device, such as ambient conditions (temperature, humidity, etc.), as well as data from the patient, such as, respirator, anesthesia, temperature, blood gas monitor, mental status, etc. as well as sensors and data sources ( Hoffberg, col.98, l.35-54).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine sensor in Carroll wearable device with Hoffberg's medial medical device interfaces to manipulate with the user input attributes.



***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joiya Cloud whose telephone number is 571-270-1146. The examiner can normally be reached Monday to Friday from on 7:30am-5:00pm.

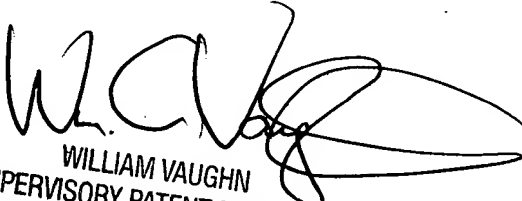
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3922. Information As per the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

***JMC***

**William J. Vaughn**

**Supervisory Patent Examiner**

**July 22, 2007**

  
WILLIAM VAUGHN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100